What is claimed is:

1. A fixing apparatus comprising:

(a) a fixing member that is composed of a support member formed of a ferromagnetic material and a heating layer formed adjacent thereto in a form of a thin film of a non-magnetic, electrically conductive material; and

(b) an exciting coil that, when energized with a high-frequency electric current, produces a high-frequency magnetic field, thereby produces induced eddy currents in the heating layer of the fixing member, thereby produces Joule's heat in the heating layer, and thereby heats the fixing member.

2. A fixing apparatus as claimed in claim 1, wherein temperature measuring means for measuring temperature of the heating layer is provided inside the fixing member.

3. A fixing apparatus as claimed in claim 1, wherein the heating layer is provided on an outer circumferential surface of the support member, and another heating layer is provided on a surface of a pressure member that makes contact with the fixing member, the exciting coil being disposed outside but near the fixing and pressure members.

4. A fixing apparatus comprising:

(a) a fixing member that fixes unfixed toner on paper;

(b) a pressure member that makes contact with the fixing member to form in between a nip through which paper is passed and that is provided with a heating layer formed of a magnetic metal; and

(c) an exciting coil that is disposed outside the pressure member.

5. A fixing apparatus as claimed in claim 4, wherein the fixing member is provided with a heating layer formed of a non-magnetic metal, and the exciting coil is disposed inside the fixing member, near a portion thereof where the fixing and pressure members make contact with each other.

6. A fixing apparatus as claimed in claim 4, wherein a high magnetic permeability member is disposed near the exciting coil.

7. A fixing apparatus as claimed in claim 4, wherein the magnetic-metal heating layer of the pressure member has a thickness greater than a magnetic field permeation depth.

8. A fixing apparatus as claimed in claim 4, wherein a heat insulating layer is provided inside the magnetic-metal heating layer of the pressure member.

9. A fixing apparatus comprising:

(a) a fixing member that fixes unfixed toner on paper and that is provided with a heating layer formed of a magnetic metal;

(b) a pressure member that makes contact with the fixing member to form in between a nip through which paper is passed; and

(c) an exciting coil that is disposed outside the fixing member.

10. A fixing apparatus as claimed in claim 9, wherein the pressure member is provided with a heating layer formed of a non-magnetic metal, and the exciting coil is

disposed inside the pressure member, near a portion thereof where the pressure and fixing members make contact with each other.

11. A fixing apparatus as claimed in claim 9, wherein a high magnetic permeability member is disposed near the exciting coil.

12. A fixing apparatus as claimed in claim 9, wherein the magnetic-metal heating layer of the fixing member has a thickness greater than a magnetic field permeation depth.

13. A fixing apparatus as claimed in claim 9, wherein a heat insulating layer is provided inside the magnetic-metal heating layer of the fixing member.

14. A fixing apparatus comprising:

(a) a fixing member that fixes unfixed toner on paper and that is provided with a heating layer formed of a magnetic metal and a heating layer formed of a non-magnetic metal, the non-magnetic-metal heating layer being kept in intimate contact with an outer surface of the magnetic-metal heating layer;

(b) a pressure member that makes contact with the fixing member to form in between a nip through which paper is passed; and

(c) an exciting coil that is disposed outside the fixing member.

15. A fixing apparatus as claimed in claim 14, wherein a high magnetic permeability member is disposed outside the fixing member, near the exciting coil.

16. A fixing apparatus comprising:

(a) a fixing member that fixes unfixed toner on paper and that is provided with a heating layer formed of a magnetic metal and a heating layer formed of a non-magnetic metal, the non-magnetic-metal heating layer being kept in intimate contact with an inner surface of the magnetic-metal heating layer;

(b) a pressure member that makes contact with the fixing member to form in between a nip through which paper is passed; and

(c) an exciting coil that is disposed inside the fixing member, near a portion thereof where the fixing and pressure members make contact with each other.

17. A fixing apparatus as claimed in claim 16, wherein a high magnetic permeability member is disposed inside the fixing member.